



(11)

EP 1 688 260 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
17.10.2007 Bulletin 2007/42

(51) Int Cl.:
B41J 2/175 (2006.01)

(43) Date of publication A2:
09.08.2006 Bulletin 2006/32

(21) Application number: 06250559.9

(22) Date of filing: 01.02.2006

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI
SK TR**

Designated Extension States:
AL BA HR MK XII

- Chung, Jae-woo
Suwon-si
Gyeonggi-do (KR)
- Lee, You-seop
Giheung-gu
Yongin-si
Gyeonggi-do (KR)

(30) Priority: 05.02.2005 KR 2005010991

(71) Applicant: Samsung Electronics Co., Ltd.
Suwon-si, Gyeonggi-Do (KR)

(72) Inventors:
• Hong, Young-ki
Anyang-si
Gyeonggi-do (KR)

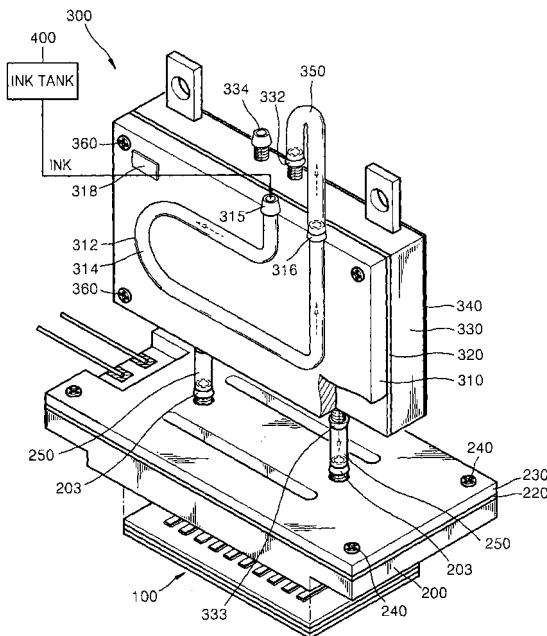
(74) Representative: **Greene, Simon Kenneth**
Elkington and Fife LLP
Prospect House
8 Pembroke Road
Sevenoaks,
Kent TN13 1XR (GB)

(54) **Ink supply apparatus and inkjet printhead package having the same**

(57) Provided are an ink supply apparatus and an inkjet printhead package having the ink supply apparatus. The ink supply apparatus includes a preheating plate, an ink reservoir, a pressure adjusting film, and a flat preheater. The preheating plate includes an ink path having a first ink inlet allowing inflow of ink and a first ink outlet allowing outflow of the ink. The ink reservoir includes an ink containing space, a second ink inlet allowing inflow of the ink from the first ink outlet of the preheating plate into the ink containing space, and a second ink outlet supplying the ink to the printhead chip from the ink containing space. The pressure adjusting film is attached to a surface of the ink reservoir to cover the ink containing space. The flat preheater is disposed between the preheating plate and the ink reservoir for making thermal contact with the preheating plate and the ink reservoir. The inkjet printhead package includes the ink supply apparatus, a frame including an ink supply hole connected with the second ink outlet of the ink reservoir of the ink supply apparatus, and a printhead chip mounted on a bottom of the frame. Therefore, ink can be heated more efficiently to a sufficient temperature, so that the inkjet printhead chip can eject the ink at a high performance even when the ink has a high viscosity. Further, the ink can be supplied to the printhead chip at a uniform pres-

sure, so that the ink ejection can be performed stably.

FIG. 1





DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	EP 1 238 809 A (SEIKO INSTR INC [JP]) 11 September 2002 (2002-09-11) * paragraph [0069] - paragraph [0070] * * paragraph [0046] * * paragraph [0078] * * figure 8 * * figure 11 * * abstract * -----	1	INV. B41J2/175
TECHNICAL FIELDS SEARCHED (IPC)			
B41J			
1	The present search report has been drawn up for all claims		
	Place of search	Date of completion of the search	Examiner
	The Hague	4 September 2007	João, César
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 25 0559

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-09-2007

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 1238809	A	11-09-2002	JP US	2002264362 A 2002130940 A1		18-09-2002 19-09-2002